# Dan Letscher Summer Internship

06.17.2015 • 09.17.2015

## Overview

#### **Libraries updated/created**

- clronep
- cpponep
- javaonep
- goonep
- pyonep
- exoline
- arduino\_exosite\_library
- particle\_exosite\_library

#### **Tutorial Videos**

- Exoline demo
- Portals dashboards, custom widgets, themes

#### **Demos**

- Coffee subscription widget
- ESP8266 Occupancy Sensor
- Test device Chrome extension?

# Libraries and GitHub repos

## clronep

## https://github.com/exosite-labs/clronep

## **API Wrapper Additions/Updates**

- RPC: writegroup, recordbatch, usage, wait, listing
- All of provisioning
- Etc: update to .NET 4.6, Json.NET
   7.0.1 (the latter still a pending pull request)

#### **New Examples**

- Wait example with threading
- Provisioning example similar to pyonep
- GUI for both examples

## cpponep

## https://github.com/exosite-labs/cpponep

## **API Wrapper Additions/Updates**

- RPC: writegroup, usage, recordbatch, listing
  - remove comment
- All of provisioning
- etc: update to jsoncpp 1.6.4

#### **New Examples**

- Writegroup example
- Provisioning example similar to pyonep

## javaonep https://github.com/exosite-labs/javaonep still pending pull request

#### **API Wrapper Additions/Updates**

- RPC: writegroup, recordbatch, usage, wait
- All of provisioning

#### **New examples**

 Provisioning example similar to pyonep

# goonep https://github.com/exosite-labs/goonep

- Based on Zak Chen's library
- Completely implement the RPC wrapper and entirety of provisioning wrapper
- Design tests in Go's testing module to test RPC and provisioning

# pyonep https://github.com/exosite-labs/pyonep

- Add manage\_by\_sharecode to provisioning API wrapper and example
  - So that you can clone devices from one portal to another
- With Dan Weaver: add RPC move command

# exoline https://github.com/exosite/exoline

- Work with Weaver to implement RPC move command
- Used exoline plugin capabilities, call to pyonep to actually make the API call
- Include move\_test in exoline's tests

## arduino\_exosite\_library https://github.com/exosite-garage/arduino\_exosite\_library

Add and and adapt the library to the community-sourced Library Manager

• • •	Librar	y Manager	
Type All ‡	Topic All	‡ Exosite	
Exosite by Patrick Barrett Easily interface with Exosite's : More info	<b>simple data APIs.</b> This allows you to	easily read and write data to Exosite's One Platform.	Install
			Close

# arduino\_exosite\_library https://github.com/exosite-garage/arduino\_exosite\_library

- Make fully compatible for ESP8266 boards
  - #ifdef to fix constructor issues
  - submitted issue that got fixed for esp8266/Arduino custom Arduino board (strtoul)

```
35 Exosite::Exosite(Client * client)
36 {
       client = _client;
       #if !defined(ESP8266)
       fetchNVCIK():
41 }
    Exosite::Exosite(const char *_cik, Client *_client)
       strncpy(cik, _cik, 41);
       client = client;
    Exosite::Exosite(const String cik, Client * client)
       cik.toCharArray(cik, 41);
       client = _client;
    #if defined(ESP8266)
56 void Exosite::begin(){
       fetchNVCIK();
59 #endif
```



# particle\_exosite\_library https://github.com/exosite-garage/particle\_exosite\_library

- Adapt arduino\_exosite\_library to be compatible with Particle boards
- Add provisioning example and fix simple read/write example
- Library includable via search on web IDE (Particle Build)

**Published Library** 

EXOSITE 0.0.2

O

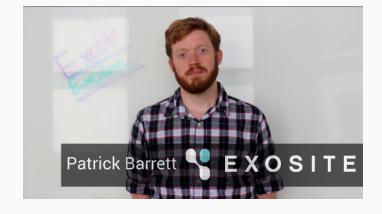
Connect to the Exosite Platform Quickly and Easily



## **Tutorial Videos**

# Tutorial Videos http://docs.exosite.com/videos/

- Four videos:
  - Using exoline
  - Creating a dashboard in Portals
  - Using custom widgets in Portals
  - Creating a custom theme in Portals



- Process for creation outlined at <a href="https://i.exosite.com/display/Support/Tutorial+Video+Creation">https://i.exosite.com/display/Support/Tutorial+Video+Creation</a>
- Make more! (we have a whole list in Basecamp!)

# Demos

## Coffee subscription widget

https://officecoffee.exosite.com/views/3687099515/4055334776

- For both coffee drinkers and haters alike
- Custom JavaScript widget with two Lua scripts to manage a JSON table of the subscription statuses and new subscriptions as well as to send emails upon coffee being brewed



## ESP8266 Occupancy Sensor

- Reports movements detected and temperature in a conference room
  - Lua script determines from average movements if conference room is occupied
- Google Apps Scripts report booleans to see if conference room is booked
- Documented at <a href="https://i.exosite.">https://i.exosite.</a>
   com/git/danielletscher/esp8266\_occupancy
  - Wrote firmware for power-saving intermittent sleep mode and quick-reporting plugged-in mode



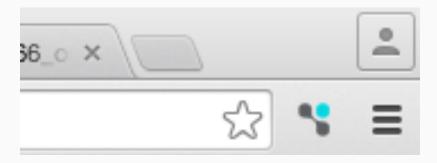
## ESP8266 Occupancy Sensor

- Check it out at <a href="https://smartoffice.exosite.com/views/2750425599/3154403329">https://smartoffice.exosite.com/views/2750425599/3154403329</a>
- Public dashboard: <a href="https://smartoffice.">https://smartoffice.</a>
   exosite.
   com/views/2750425599/2535707868
- Add sound sensor?



## Test device Chrome extension?

Maybe -- work on today and tomorrow to try to get done



# Thank you so much for the opportunity!